

H6SQT: Software Quality and Testing

Module Code:	H6SQT
Long Title	Software Quality and Testing APPROVED
Title	Software Quality and Testing
Module Level:	LEVEL 6
EQF Level:	5
EHEA Level:	Short Cycle
Credits:	5
Module Coordinator:	
Module Author:	Alex Courtney
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	Master's degree in computing or cognate discipline.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
#	Learning Outcome Description
LO1	Describe the software testing and quality industry
LO2	Identify and describe different types of testing
LO3	Identify and describe various test design techniques
LO4	Describe a range of test management approaches
LO5	Design and run tests using a variety of languages/tools
Dependencies	
Module Recommendations	
No recommendations listed	
Co-requisite Modules	
No Co-requisite modules listed	
Entry requirements	Learners should have attained the knowledge, skills and competence gained from stage 1 of the BSc (Hons) in Computing.

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Module Content & Assessment			
Indicative Content			
An introduction to testing Types of problems. . Test types. . Objectives of testing. Steps in analysing an object and designing appropriate tests. . The testing industry. Seven principles of testing. Fundamental test process. Psychology of testing			
Test types expanded Black/white box testing. . Regression testing. . Unit testing.. Integration testing.. System testing.. Sanity testing.. Smoke testing.. Interface testing.. Regression testing.. Beta/Acceptance testing.			
Communication & Documentation Requirements analysis. Problem reporting. Standard documentation techniques.			
Practical software testing Unit testing & automation live example			
Testing for the web Performance testing. . Logging. . Browser compatibility testing. Progressive enhancement techniques. Accessibility testing			
User testing A/B testing. Acceptance testing. Feedback formats			
Modern development paradigms Agile. Waterfall. TDD			
Practical software testing More software testing tools			
Impact and Risk What is risk. . Risk based testing & product quality. Defect management			
Practical work Students work on a practical project(likely Team project) and implement an entire testing strategy.			
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Practical work Presentations.			
Assessment Breakdown			%
Coursework			100.00%
Assessments			
Full Time			
Coursework			
Assessment Type:	Formative Assessment	% of total:	Non-Marked
Assessment Date:	n/a	Outcome addressed:	1,2,3,4,5
Non-Marked:	Yes		
Assessment Description: Ongoing feedback on ongoing tutorial activities. Feedback on regular reflection.			
Assessment Type:	Continuous Assessment	% of total:	20
Assessment Date:	n/a	Outcome addressed:	1,2,3,4,5
Non-Marked:	No		
Assessment Description: Students will be assessed in class on a bi-weekly basis, having to upload lab content			
Assessment Type:	Continuous Assessment	% of total:	30
Assessment Date:	n/a	Outcome addressed:	1,2,3,4
Non-Marked:	No		
Assessment Description: Students must answer a theory-based quiz on the software testing industry and test types			
Assessment Type:	Project	% of total:	50
Assessment Date:	n/a	Outcome addressed:	4,5
Non-Marked:	No		
Assessment Description: Students must practically test and produce a report for a major piece of software that they have created			
No End of Module Assessment			
No Workplace Assessment			
Reassessment Requirement			
Repeat examination <i>Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.</i>			
Reassessment Description Coursework Only This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination. Students failing Software Quality will be given a piece of software to develop a fleshed-out testing plan and report for, including practical tests			

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Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom & Demonstrations (hours)	24	Every Week	24.00
Tutorial	Other hours (Practical/Tutorial)	12	Every Week	12.00
Independent Learning	Independent learning (hours)	89	Every Week	89.00
Total Weekly Contact Hours				36.00

Module Resources	
<i>Recommended Book Resources</i>	
Brian Hambling et al., (2019), , Software Testing: An ISTQB-BCS Certified Tester Foundation guide, BCS, [978-.	
<i>Supplementary Book Resources</i>	
Bernard Homès,. (2013), , Fundamentals of Software Testing.	
<i>This module does not have any article/paper resources</i>	
<i>This module does not have any other resources</i>	
Discussion Note:	